APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,903	12/28/2000	Paul Kirkby	476-1981	2728

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EXAMINER
NGUYEN, HAI V

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/750,903	KIRKBY ET AL.
	Examiner	**Art Unit**	
	Hai V. Nguyen	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2000*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the application file don 28 December 2000.

2.   Claims 1-20 are presented for examination.

Drawings

3.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because the drawings are so fuzzy, unreadable. Applicant is advised to

employ the services of a competent patent draftsperson outside the Office, as the U.S.

Patent and Trademark Office no longer prepares new drawings. The corrected drawings

are required in reply to the Office action to avoid abandonment of the application. The

requirement for corrected drawings will not be held in abeyance.

Claim Objections

4.   Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form. The element "a network

manager" is not claimed in claim 15.

5.   Claims 13, 20 are objected to because of the following informalities: "in machine

readable form" is not necessary the same "in computer readable form". Appropriate

correction is required.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fodor et al. U.S patent no. **6,788,646 B1** in view of Frank P. **Kelly**'s paper on European

Transactions On Telecommunications.

8.   As to claim 1, Fodor, Link Capacity Sharing For Throughput Blocking Optimality,

discloses a method of controlling admission of a traffic flow to a communications

network, the method comprising sampling the traffic flow *(Fodor, call-level modeling*

elastic traffic, Abstract, col. 2, line 41 – col. 4, line 2; col. 11, lines 9-18; col. 19, line 1 –

col. 20, line 18), determining from said sampling a mean bandwidth requirement for the

traffic flow and a measure of the variance from that mean *(Fodor, FIG. 5 is a graph*

illustrating the mean and the variance of the throughput of adaptive elastic flows as a

function of their service time for an illustrative example of a transmission link system,

col. 19, line 1 – col. 20, line 18; col. 11, lines 9-18) and however, Fodor does not

explicitly disclose determining from said mean and variance a price for admission of the

traffic flow to the network. Thus, the artisan would have been motivated to look into the

related network management art for potential methods and systems for implementing

determining a price for admission of the traffic flow to the network.

In the same field of endeavor, Kelly, Charging And Rate Control For Elastic Traffic,

disclose, in analogous art, that a model is described from which max--min fairness of

rates emerges as a limiting special case; more generally, the charges users are

prepared to pay influence their allocated rates *(Kelly, Abstract, section 1, pages 1-2)*.

Accordingly, it would have been obvious to one of ordinary skill in the networking

management art at the time the invention was made to have incorporated Kelly

teachings of using a model for determining the user's rate according to a proportional

fairness criterion *(Kelly, Abstract, pages 1-10)* with the teachings of Fodor, for the

purpose of *achieving the fairness and the system optimum when users' choices of*

charges and the network's choice of allocated rates are in equilibrium (Kelly, page 10,

section 5).

9.   As to claim 2, Fodor-Kelly discloses, wherein respective maximum bandwidth

control limits are defined for both the mean and variance of the components of the traffic

flow, and wherein said admission price is increased as the separate demands of the

traffic flow approaches one or both of these limits *(Fodor, Figs. 5-7, col. 2, line 41 – col.*

4, line 2; Kelly, pages1-10).

10.   As to claim 3, Fodor-Kelly discloses, wherein said price of an ingress flow is

determined in the sum of separate pricing determinations for said mean and said

variance *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; Kelly, pages1-10)*.

11.   As to claim 4, Fodor-Kelly discloses, wherein said mean pricing determination is

a function of the difference between said mean and the control limit, and of the first and

second derivatives against time of said means *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; Kelly, pages1-10)*.

12.   As to claim 5, Fodor-Kelly discloses, wherein said variance pricing determination is a function of the difference between said control limit and the sum of said mean and the standard deviation corresponding to said variance, and of the first and second derivatives against time of the standard deviation *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; Kelly, pages1-10)*.

13.   As to claim 6, Fodor-Kelly discloses where said variance pricing further includes a weighting function *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; Kelly, pages1-10)*.

14.   As to claim 7, Fodor-Kelly discloses a method of controlling traffic flow in a communications packet network, the method comprising determining for flows within the network a mean utilization requirement and a measure of a variance from that mean, and determining from said mean and variance a bandwidth pricing so as to control the admission of said flows to the network *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 11, lines 9-18; col. 19, line 1 – col. 20, line 7; Kelly, pages1-10)*.

15.   As to claim 8, Fodor-Kelly discloses a method of controlling admission of traffic flows to a communications network, the method comprising sampling the traffic flows each at an ingress, and sampling an aggregate flow of said flows at some or all of the resources used by the aggregate flow, determining from said sampling a mean bandwidth requirement for each traffic flow and a measure of the variance from that mean, determining from said mean and variance measurements first and second prices for the mean and variance components of the controlled traffic flows that are admitted to

the network, and determining from said first and second prices an admission cost for each said flow so as -to regulate the admission of that flow *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 11, lines 9-18; col. 19, line 1 – col. 20, line 7; Kelly, pages1-10).*

16.   As to claim 9, Fodor-Kelly discloses a method as claimed in claim 8, wherein maximum bandwidth control limits are defined respectively for both the mean and variance components of the traffic flow, and wherein said first and second prices are increased as the separate demands of the traffic flow approach or exceed their respective limits *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 19, line 1- col. 20, line 18;Kelly, pages1-10).*

17.   As to claim 10, Fodor-Kelly discloses, wherein said mean pricing determination is a function of the difference between said mean and the control limit and of the and of the first and second derivatives against time of said mean *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 19, line 1- col. 20, line 18;Kelly, pages1-10).*

18.   As to claim 11, Fodor-Kelly discloses, wherein said variance pricing determination is a function of the difference between said control limit aid the sum of said mean and the standard deviation corresponding to said variance, and of the first and second derivatives against time of the standard deviation *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 19, line 1- col. 20, line 18;Kelly, pages1-10).*

19.   As to claim 12, Fodor-Kelly discloses, where said variance pricing further includes a weighting function *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 19, line 1- col. 20, line 18;Kelly, pages1-10).*

20.   As to claim 13, Fodor-Kelly discloses, and embodied as software in machine readable form on a storage medium *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 5, lines 10-26; col. 19, line 1- col. 20, line 18;Kelly, pages1-10)*.

21.   As to claim 14, Fodor-Kelly discloses an admission control arrangement for a communications network, the arrangement comprising sampling means for sampling a traffic flow, means for determining from said sampling means a measure of mean bandwidth requirement and of a variance from that mean, and price computation means for determining from said mean and variance a cost or price for bandwidth case so as to provide ingress price control for admission of the traffic flow to the network *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 5, lines 10-26; col. 11, lines 9-18; col. 19, line 1- col. 20, line 18;Kelly, pages1-10)*.

22.   Claims 15-18 are similar limitations of claims 2, 4-6; therefore, they are rejected under the same rationale as in claims 2, 4-6.

23.   As to claim 19, Fodor-Kelly discloses a network manager incorporating an admission control arrangement *(Fodor, Kelly, the user)*.

24.   As to claim 20, Fodor-Kelly discloses network manager embodied as software in machine readable form on a storage medium *(Fodor, Figs. 5-7, col. 2, line 41 – col. 4, line 2; col. 5, lines 10-26; col. 19, line 1- col. 20, line 18;Kelly, pages1-10)*.

25.   Further references of interest are cited on Form PTO-892, which is an

attachment to this action.

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hai V. Nguyen whose telephone number is 703-306-

0276. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jack Harvey can be reached on 703-305-9705. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

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JACK B. HARVEY
SUPERVISORY PATENT EXAMINER

Hai V. Nguyen
Examiner
Art Unit 2142